

GEORGIA DOT RESEARCH IN PROGRESS
Office of Performance-based Management and Research

November 1, 2018

Project Number	Project Title	Researcher(s) <u>Project Manager</u> Technical/Implementation (T/I) Manager	Research Technical Advisory Group (RTAG)	Starting - Completion Date	Objective
18-30	Development of Depreciation Models Utilizing the National Bridge Inventory Condition Ratings Over 25 Years	Mi Geum Chorzepa, UGA <u>Supriya Kamatkar, GDOT</u> Clayton Bennett, GDOT	Asset Management	09/13/18 06/13/19	Develop depreciation models for GDOT bridges to enhance GDOT's long-term asset management plans, consistent with MAP-21 objectives.
18-22	Full Depth Pavement Reclamation: Performance Assessment and Recommendations for Best Performance	Jay Kwon, KSU <u>Brennan, Roney, GDOT</u> Phillip Snider, GDOT	Asset Management	08/12/18 11/12/19	Evaluate performance of completed FDR sections to refine and update FDR specification, with the goal of minimizing risk of premature failure and maximizing FDR benefits.
18-21	Analysis of Isolated Girder and Bearing Movement on Lowndes County Bridge	David Scott, Ga. Tech <u>Supriya Kamatkar, GDOT</u> Clayton Bennett, GDOT	Asset Management	05/30/18 05/30/19	Inspect and analyze plate girder/ and bearing that have moved on a Lowndes Co. bridge to determine movement causes.
18-20	A New Digital Repository and Annotated Bibliography for GDOT R&D Projects	Holly Croft, GC&SU <u>David Jared, GDOT</u> David Jared, GDOT	Asset Management	09/07/18 02/07/19	Create digital repository for bibliographic entries and reports; establish taxonomy for tagging and searching entries and reports; create annotated bibliography of GDOT research reports within digital repository; test systems to ensure usability; and train GDOT staff on use/potential of repository.
18-17	Phase III: Smart Proximity Work Zone Safety Technology Deployment	Yong Cho, Ga. Tech <u>David Jared, GDOT</u> Erany Robinson, GDOT	Safety	10/15/18 10/15/19	Develop low-cost and scalable smart proximity alert system using Bluetooth mobile sensing for alerting workers and equipment operators in proximity hazards in highway work zones.
18-14	Economic Impact Analysis of Georgia's Rural and Small Urban Transit Systems	Laurie Garrow, Ga. Tech <u>Trang Mai, GDOT</u> Kaycee Mertz, GDOT	Policy/Workforce	08/12/18 08/12/20	Analyze impacts of Georgia's rural and small urban transit systems; identify current trip patterns and locations of key facilities; and quantify benefits/costs of (a) extending service days/hours for these systems; and (b) adding service to rural and small urban counties without transit, in terms of public health.
18-13	Developing a New Cash Flow Expenditures Model Considering the Flexibilities Offered by the Design-Build-Finance (DBF) and Public-Private Partnership (P3) Project Delivery Methods	Baabak Ashuri, Ga. Tech <u>Supriya Kamatkar, GDOT</u> Darryl VanMeter, GDOT	Policy/Workforce	08/03/18 09/03/20	Develop a cash flow expenditure model for estimating various cost items incurred in DBF and P3 projects, taking into account flexibilities offered by the DBF and P3 delivery methods.

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18-12	Evaluation of GDOT Office of Program Delivery Project Management Organization Structure Compared to Other State DOT Practices (Tier 1): Best Management Practices (BMPs) of Design-Bid-Build (DBB) Project Delivery	Baabak Ashuri, Ga. Tech <u>Supriya Kamatkar, GDOT</u> Bryan Lott, GDOT	Policy/Workforce	08/03/18 05/03/19	Identify and document BMPs in state DOTs with regard to the structure of traditional DBB project delivery.
18-11	Phase III: Transportation Investment Act - Benchmark Assessment and Benefit-Cost Analysis, 2013-2018	Thomas Boston, Ga. Tech <u>Supriya Kamatkar, GDOT</u> Kenneth Franks, GDOT	Policy/Workforce	09/07/18 04/07/20	Evaluate impact of TIA project expenditures post-implementation; study outcome of TIA referendum in pertinent Georgia regions, identifying influencing factors; and deliver benefit-cost analysis to determine net social gain of implementing TIA.
18-09	Investigation on Water Quality Impacts of Bridge Stormwater Runoff from Scupper Drains on Receiving Waters	George Fu, Ga. Southern <u>Brennan Roney, GDOT</u> David Hedeon, GDOT	Policy/Workforce	09/07/18 09/07/20	Obtain sample of bridge stormwater runoff from scupper drains and stream water upstream/downstream of bridge sites; identify water quality parameters to be tested; analyze results to understand scupper drain impactors on receiving water quality; and determine effectiveness of simulation tool for evaluating water quality impacts of scupper drains on receiving waters.
18-07	Best Practices and Specifications for Massive Concrete Drilled Shafts	Lauren Stewart, Ga. Tech <u>Supriya Kamatkar, GDOT</u> Steve Gaston, GDOT	Policy/Workforce	09/25/18 07/25/21	Understand implementation and performance issues; quantify thermal conditions; utilize ongoing thermal research and other states' best practices for application and demonstration; and recommend practices for GDOT.
18-06	Review of Special Provisions and Other Conditions Placed on GDOT Projects for Imperiled Aquatic Species Protection (Main Project Phase)	Seth Wenger, UGA <u>Binh Bui, GDOT</u> Christopher Goodson, GDOT	Policy/Workforce	09/25/18 03/25/20	Identify special provisions and other conditions necessary for managing impacts of crossings on imperiled aquatic species; and create a biological assessment in support of a programmatic agreement.
18-02	Impact of Construction Loads on Steel Diaphragm Bridge Design	Lauren Stewart, Ga. Tech <u>Supriya Kamatkar, GDOT</u> Steve Gaston, GDOT	Policy/Workforce	09/25/18 06/25/20	Understand loads during construction; measure effect of these loads; quantify these loads using computational models; draft recommended practices; and recommend standardized steel diaphragm designs based on appropriate loading conditions, span lengths and beam types.
18-01	Development of GDOT Ultra-High Performance Concrete for Bridge Deck Closure Pours	Lauren Stewart, Ga. Tech <u>Supriya Kamatkar, GDOT</u> Dexter Whaley, GDOT	Asset Management	04/05/18 04/05/21	Develop an ultra-high performance concrete based on locally available materials with sufficient direct tensile strength, ductility, and toughness under tensile loads.

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17-36	2018 GDOT Employee Survey	Stephan Durham, UGA <u>Brennan Roney, GDOT</u> Alma Mujkanovic, GDOT	Policy/Workforce	03/16/18 03/16/19	Review and update GDOT Employee Survey; conduct survey; analyze results; present survey results to GDOT management; and, develop reports for GDOT.
17-35	Estimated Economic and Transportation System Impacts of Selected Georgia Department of Transportation Projects	Wes Clarke, UGA <u>Supriya Kamatkar, GDOT</u> Josh Waller, GDOT	Policy/Workforce	04/05/18 02/05/19	Estimate economic (1) impact of spending on transportation projects in terms of jobs supported, labor income associated with those jobs, and value added to Georgia's economy; (2) value of transportation system efficiency and safety improvements where those are objectives of specific projects.
17-34	Emerging Trends in Design Professional Liability Policies in Innovative Project Delivery	Baabak Ashuri, Ga. Tech <u>Supriya Kamatkar, GDOT</u> Darryl VanMeter, GDOT	Policy/Workforce	03/16/18 02/16/19	Enhance GDOT understanding of emerging trends in professional liability policies market, especially applied to innovative project delivery.
17-32	Validating Change of Sign and Pavement Conditions and Evaluating Sign Retroreflectivity Condition Assessment on Georgia's Interstate Highways Using 3D Sensing Technology	James Tsai, Ga. Tech <u>Binh Bui, GDOT</u> Erany Robinson, GDOT	Asset Management	12/18/17 12/18/18	Validate the change of sign and pavement conditions on Georgia interstates using 3D sensing technology and evaluate sign retroreflectivity conditions using mobile LiDAR.
17-31	Public Response to Different Planting Techniques for Annual Color and Enhancement	Celine Manoosingh, Ga. Southern <u>David Jared, GDOT</u> Felicity Davis, GDOT	Policy/Workforce	04/09/18 10/09/19	Measure public perception on optimal design approaches that are aesthetically acceptable, cost efficient, and environmentally responsible.
17-30	Georgia's Long-term Pavement Performance Monitoring and Management Plan - Detail Design of Plan	James Tsai, Ga. Tech <u>Binh Bui, GDOT</u> Erany Robinson, GDOT	Asset Management	12/07/17 12/07/18	Develop a detailed design plan for GDOT's long-term pavement performance monitoring and management.
17-29	Development of Possible Solutions to Eliminate or Reduce Deck Cracking on Skewed Bridges Built by Using the Accelerated Bridge Construction Method	Mi Geum Chorzepa, UGA <u>Binh Bui, GDOT</u> Peter Wu, GDOT	Policy/Workforce	12/07/17 03/07/19	Alleviate and/or prevent cracks developed in cast-in-place reinforced concrete bridge decks.

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17-28	Bridge Asset Valuation Utilizing Condition States Obtained from Element-Based Inspection Inventories and Depreciation Models over the Life Cycle of the Assets	Mi Geum Chorzepa, UGA <u>Supriya Kamatkar, GDOT</u> Clayton Bennett, GDOT	Asset Management	11/14/17 04/14/19	Evaluate efficiency of the latest bridge asset valuation process for use by GDOT and identify value engineering methodologies and tools that optimize spending on a particular bridge.
17-27	Hydraulic Effects of Temporary Bridge Construction Activities	Brian Bledsoe, UGA <u>Supriya Kamatkar, GDOT</u> Susan Beck, GDOT	Asset Management	05/21/18 06/21/20	Improve GDOT's ability to effectively respond to environmental permitting agency concerns about potential geomorphic and ecological effects of temporary instream features associated with bridge construction practices.
17-26	Public Involvement/Education on Alternative Intersection/Interchange Designs	Michael Rodgers, Ga. Tech <u>David Jared, GDOT</u> Chris Raymond, GDOT	Policy/Workforce	03/30/18 06/30/19	Develop communications materials to supplement existing ones used by GDOT staff at public meetings for alternative intersection/interchange designs, or for general education material.
17-25	Establishing a Correlation between Resilient Modulus and CBR/Soil Index Properties and Development of a Performance-Based Specification (PBS) for Pavement Subgrade Materials	Sonny Kim, UGA <u>Binh Bui, GDOT</u> Ian Rish, GDOT	Policy/Workforce	11/14/17 05/14/19	Develop a simple method to estimate resilient modulus based on available resources and develop a PBS approach for subgrade materials.
17-23	GDOT Roadmap for Driverless Vehicles	Michael Hunter, Ga. Tech <u>David Jared, GDOT</u> Andrew Heath, GDOT	Asset Management	10/04/17 12/31/18	Develop (1) synthesis of current research on driverless vehicles, including scenarios for future conditions; and (2) roadmap of future actions recommended for GDOT.
17-22	Optimizing Design of GDOT Post Construction Stormwater BMPs for Performance while Minimizing Right-of-Way Acquisition and Peak Flows	Susan Burns, Ga. Tech <u>Brennan Roney, GDOT</u> Brad McManus, GDOT	Asset Management	08/29/17 08/29/20	Provide data that aids in modification of the GDOT drainage manual for the selection criteria specified to implement low-maintenance stormwater BMPs.
17-20	Detection Technology Testbed in I-475: Technology Feasibility Study	Angshuman Guin, Ga. Tech <u>Trang Mai, GDOT</u> Roderick Ware and Marc Plotkin, GDOT	Policy/Workforce	08/10/17 08/10/19	Study the feasibility and potential benefits of a selected video-based automatic incident detection technology relative to existing detection practices.

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17-19	Critical Assessment of High-Friction Surface Treatment (HFST)'s Long-term Performance in Georgia under Different Roadway Conditions	James Tsai, Ga. Tech <u>Binh Bui, GDOT</u> Ian Rish, GDOT	Asset Management	10/05/17 10/05/21	Develop a guidance document that addresses the components needed for a proactive HFST monitoring and maintenance program.
17-18	Innovative Training Modules for Rapid and Continuous Deployment of MEPDG	Sonny Kim, UGA <u>Binh Bui, GDOT</u> Ian Rish, GDOT	Policy/Workforce	10/05/17 02/05/20	Assist GDOT staff and contractors/ consultants in understanding MEPDG design inputs and their implications and learning to determine the input parameters, using MEPDG and Pavement ME software.
17-16	Development of Road CONstruction Database (RECORD) System	Stephan Durham, UGA <u>Brennan Roney, GDOT</u> John Hancock, GDOT	Policy/Workforce	08/17/17 08/17/19	Develop and implement a construction lessons learned program tool for GDOT construction operations statewide.
17-15	Extended Field Testing of a Portable Pedestrian and Cyclist Detection System	Colin Usher, Ga. Tech <u>Trang Mai, GDOT</u> Ed David Adams, GDOT	Mobility	09/06/17 09/06/19	Conduct an extended field test of the existing pedestrian detection system,, including enhancing system reporting capabilities and expanding existing system operational parameters.
17-14	Productive Reuse of Savannah River Dredge Material	Susan Burns, Ga. Tech <u>Brennan Roney, GDOT</u> Jon Smith, GDOT	Asset Management	08/17/17 08/17/20	Explore environmentally sound and economically viable productive reuse options for dredge materials obtained from the Savannah River.
17-13	Development of Implementation Plan for GDOT e-Construction Program	Stephan Durham, UGA <u>Binh Bui, GDOT</u> John Hancock, GDOT	Policy/Workforce	08/09/17 11/15/18	Identify needs for implementing an e-Construction (ECP) program to improve GDOT design and construction; evaluate current e-Construction practices used by GDOT; and establish an implementation plan to fully execute ECP statewide.
17-12	Mechanical Integrity and Sustainability of Pre-stressed Concrete Bridge Girders Repaired by Epoxy Injection – Phase III	Chloé Arson, Ga. Tech <u>David Jared, GDOT</u> Peter Wu, GDOT	Asset Management	08/09/17 02/09/19	Measure mechanical properties of cracked concrete repaired by epoxy in the lab to calibrate and validate the cohesion model proposed in Phase II.

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17-11	Best Management Practices for Post-construction Restoration of Rights-of-way in Saltwater Marshes, Estuaries and Other Tidally Influenced Areas	Sonny Kim, UGA <u>David Jared, GDOT</u> David Hedeem, GDOT	Policy/Workforce	09/22/17 09/22/19	Establish best management practices for post-construction restoration of right-of-ways in saltwater marshes, estuaries, and other tidally influenced areas.
17-10	Enhancing Extension Recommendations for Improving Herbicide Resistance Management on Georgia Roadsides	Patrick McCullough, UGA <u>David Jared, GDOT</u> Ray Dorsey, GDOT	Policy/Workforce	08/25/17 08/25/19	Develop herbicide resistance management programs and educational training to enhance the control of herbicide resistant weeds in GDOT spray programs after surveying Georgia roadside ryegrass populations and quantifying herbicide resistance at various locations of ryegrass biotypes.
17-09	Phase II - Investigation of Recycled Tire Chips and Fiber Reinforcement for Use in GDOT Concrete Used to Construct Barrier Walls and Other Applications	Stephan Durham, UGA <u>David Jared, GDOT</u> Peter Wu, GDOT	Safety	08/29/17 08/29/19	Develop a finite element analysis model for crash simulation of vehicle impacts and assess the impact and full potential of concrete barrier design using Phase I results and a new examination of fiber-reinforced concrete.
17-08	Mechanical Integrity and Sustainability of Pre-Stressed Concrete Bridge Girders Repaired by Epoxy Injection - Phase II	Chloé Arson, Ga. Tech <u>David Jared, GDOT</u> Peter Wu, GDOT	Asset Management	10/05/17 10/05/19	Predict concrete mechanical recovery induced by epoxy injection, to check girder acceptance criteria recommended by NCHRP and PCI.
17-07	Research and Support to Implement Recommendations of the GDOT Small Business Program Evaluation	Thomas Boston, Ga. Tech <u>Supriya Kamatkar, GDOT</u> Betty Mason, GDOT	Policy/Workforce	08/25/17 12/25/18	Implement recommendations of Small Business Program (SBP) Evaluation and work with the Georgia Assembly to implement a small business set-aside provision for emerging small businesses as part of its SBP.
17-05	Quantifying the Impact of Cover Deficiencies on Bridge Deck Service Life: Recommendations for Contracting	Lauren Stewart, Ga. Tech <u>Supriya Kamatkar, GDOT</u> Peter Wu, GDOT	Asset Management	08/09/17 08/09/19	Develop recommended GDOT practices for bridge deck construction contracts based upon performance.
17-04	Economic Impact of Bicycling in Georgia	Shatakshee Dhongde, Ga. Tech <u>Trang Mai, GDOT</u> Jack Anninos, GDOT	Policy/Workforce	09/06/17 09/06/20	Analyze how bicycling and related activities benefit Georgia's economy, providing a consistent framework to evaluate costs and benefits of proposed bicycle projects.

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17-03	Strategies for Communicating Quality Expectations for Environmental Service Contracts: Phase II	Gordon Kingsley, Ga. Tech <u>Supriya Kamatkar, GDOT</u> Gail D'Avino, GDOT	Policy/Workforce	08/09/17 08/09/19	Improve timeliness and quality of environmental reports provided by consultants.
17-01	A Statewide Assessment of Public Transit Funding Needs for Counties Trending Urban	Laurie Garrow, Ga. Tech <u>Trang Mai, GDOT</u> Carol Comer, GDOT	Policy/Workforce	08/09/17 08/09/19	Identify which counties are trending urban in Georgia and are at most risk for losing 5311 funding and develop recommendations to help prepare these counties' transition to 5307 funding.
16-38	Beltline Bicyclist Facility Preferences and Effects on Increasing Trips	Kari Watkins, Ga. Tech <u>Trang Mai, GDOT</u> Jack Anninos, GDOT	Asset Management	12/16/16 04/16/19	Determine (1) preferences of current and potential cyclists for different types of bicycle facilities; (2) how preferences vary by demographics, cyclist experience, and community environments; and (3) effectiveness of multi-use trails to attract new cyclists and increase travel by existing cyclists.
16-37	Data-Driven Pavement Maintenance and Rehabilitation Strategies for GDOT's New State Route Prioritization Policy	James Tsai, Ga. Tech <u>Binh Bui, GDOT</u> Erany Robinson, GDOT	Asset Management	12/16/16 04/08/19	Improve reliability of long-term pavement performance forecasting and maintenance/rehab. (M&R) analysis using models based on current COPACES data; and (2) determine adequate pavement M&R strategies to support GDOT's new state route priority categorization.
16-34	Bird-Long Island Management Study Phase 1B: Hydrodynamic Characterizations for Bird/Long Island	Kevin Haas, Ga. Tech <u>Brennan Roney, GDOT</u> Pamela Baughman, GDOT	Asset Management	12/08/16 12/08/18	Quantify the physical dynamics leading to shoreline change through direct observations of waves and currents.
16-33	Bird-Long Island Management Study Phase 1A: The Application of Geospatial Tools to Quantify Shoreline Change and the Threat to Cultural and Natural Resources on Bird/Long Island	Clark Alexander, UGA <u>Brennan Roney, GDOT</u> Pamela Baughman, GDOT	Asset Management	10/05/16 11/05/18	Document current shoreline physical and biological characteristics; document historic shoreline changes, and outline management plans for future island integrity and mitigation trajectories.
16-31	The Impact of Emerging Technologies and Trends on Travel Demand in Georgia	Patricia Mokhtarian, Ga. Tech <u>Trang Mai, GDOT</u> Habte Kassa, GDOT	Policy/Workforce	09/28/16 09/28/19	Illuminate the impacts of new technologies and emerging trends on travel demand in Georgia.
16-30	Phase II – Evaluation of Metakaolin for GDOT Concrete Specifications (ASTM C618 N Pozzolin) and Mass Concrete Provision	Mi Geum Chorzepa, UGA <u>David Jared, GDOT</u> Peter Wu, GDOT	Asset Management	08/05/16 07/05/19	Find alternatives to fly ash that perform similarly to Class F fly ash with regards to pozzolanic reactivity and other properties.

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16-25	Investigation and Guidelines for Mass Concrete Construction Management	Yong Cho, Ga. Tech <u>Supriya Kamatkar, GDOT</u> Beau Quarles, GDOT	Asset Management	07/31/16 03/31/19	Characterize heat generation in mass concrete placements encountered in GDOT construction to (1) create an analytical method for determining concrete cooling requirements; and (2) develop guidelines for transportation infrastructure applications.
16-23	HR Data-Tool (HRDT): A Modular System for Supporting GDOT Human Resource Planning and Decision Making	David Frost, Ga. Tech <u>Supriya Kamatkar, GDOT</u> Brian Robinson, GDOT	Policy/Workforce	07/31/16 03/31/19	Provide GDOT with an integrated modular tool that uses existing HR databases to strategically plan for a range of activities.
16-21	Flash Tracking for Accelerated Project Delivery (APD)	Pardis Pishdad-Bozorgi, Ga. Tech <u>Supriya Kamatkar, GDOT</u> Darryl VanMeter, GDOT	Mobility	07/15/16 11/30/18	Explore the adoption and adaptation of Construction Industry Institute's Flash Track best practices for GDOT's successful execution of APD.
16-19	Development of MEPDG Input Database for Asphalt Mixtures	Sonny Kim, UGA <u>Binh Bui, GDOT</u> Ian Rish, GDOT	Mobility	07/27/16 04/27/19	Expand dynamic modulus data for aggregate in Superpave mixes; recommend test for strain level and fatigue cracking prediction; evaluate lab performance of asphalt mixes; and propose guidelines for input data.
16-18	Assessment of Construction Points for Grade Control and Reference in 3D	Yong Cho, Ga. Tech <u>Supriya Kamatkar, GDOT</u> John Hancock, GDOT	Mobility	07/31/16 01/31/19	Investigate the causes of inaccuracies of grade elevations from current practices and identify best practices for grade control and referencing on construction projects in Georgia.
16-12	The Integration of Regional MPO Models into the Georgia Statewide Travel Demand Model (GSTDM) – Phase 1	Giovanni Circella, Ga. Tech <u>Trang Mai, GDOT</u> Habte Kassa, GDOT	Mobility	05/25/16 11/25/18	Develop a model integration framework to integrate the GSTDM modeling framework with the 16 models developed for travel demand forecasting purposes at the MPO level in Georgia.
16-11	Development of Geosynthetic Design and Construction Guidelines for Pavement Embankment Construction in North Georgia	Sonny Kim, UGA <u>Brennan Roney, GDOT</u> Moussa Issa, GDOT	Mobility	05/25/16 12/25/18	Identify and evaluate potential applications of geosynthetics in solving the problem of migration of fines.

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16-10	Improvement of Climate Data for Use in MEPDG Calibration and Other Pavement Analysis	Stephan Durham, UGA <u>Binh Bui, GDOT</u> Ian Rish, GDOT	Asset Management	09/28/16 12/28/18	Integrate Modern-Era Retrospective Analysis for Research and Application estimates as an alternative climate source to improve the MEPDG pavement designs in Georgia.
16-09	Field Test Based Guidelines Development for the Integration of Unmanned Aerial Systems (UASs) in GDOT Operations	Javier Irizarry and Eric Johnson, Ga. Tech <u>Brennan Roney, GDOT</u> Colette Edmisten, GDOT	Mobility	04/19/16 12/19/18	Determine the technological feasibility, advantages, limitations, and legal/social implications of UAS use for applicable GDOT operations.
16-06	Waste Management of Highway Right of Way Areas in Southeast Georgia	Francisco Cubas, Ga. Southern <u>Brennan Roney, GDOT</u> Corbett Reynolds, GDOT	Asset Management	10/17/16 06/17/19	Identify and locate sites containing suitable vegetation for biomass and/or compost production along highway right-of-way.
16-01	Study of Temporal Pavement Cracking in 3D to Determine Optimal Time and Cost-Effective Treatment Methods	James Tsai, Ga. Tech <u>Brennan Roney, GDOT</u> Eraay Robinson, GDOT	Asset Management	08/25/16 02/25/19	Document the procedure to determine JPCP maintenance and rehabilitation plan that optimizes cost and the potential risk for GDOT, incorporating actual deterioration behavior at both slab and segment/project levels.
15-02	Developing a Comprehensive Pavement Condition Evaluation System for Rigid Pavements in Georgia	James Tsai, Ga. Tech <u>Brennan Roney, GDOT</u> Erany Robinson, GDOT	Asset Management	05/21/15 12/05/18	Develop a comprehensive rigid pavement condition evaluation system that can standardize pavement condition evaluation procedures and treatment determination criteria for CRCP and JPCP.
14-20	Impact of Guide Specifications for Load Resistance Factor Design (LRFD) Seismic Bridge Design for Georgia	Reginald DesRoches, Ga. Tech <u>Supriya Kamatkar, GDOT</u> Bill DuVall, GDOT	Asset Management	01/06/15 11/06/18	Conduct a thorough review of GDOT LRFD policies regarding seismic design and related design programs and make recommendations for improving the policies and design procedures.
14-06	An Enhanced GDOT Pavement Preservation Guide with Optimal Timing of Pavement Preservation	James Tsai, Ga. Tech <u>Binh Bui, GDOT</u> Ernay Robinson, GDOT	Asset Management	06/18/14 12/18/18	Develop an enhanced, comprehensive pavement preservation guide to cost-effectively preserve GDOT pavements while meeting MAP-21 requirements.

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14-03	Alternative Stormwater Compliance Approaches on GDOT Right-of-way	Susan Burns, Ga. Tech <u>Binh Bui, GDOT</u> Brad McManus, Ga. Tech	Mobility	12/08/14 12/08/18	Compare the design and performance of several stormwater structures designed and constructed to fit within unique and primarily linear geometries required for roadside structures.
13-31	Determination of Range and Habitat Use for Federally Endangered Bat Species in Georgia	Steven Castleberry, UGA <u>Binh Bui, GDOT</u> Douglas Chamblin, GDOT	Mobility	06/18/14 03/31/19	Develop landscape-scale hibernating models to predict cave-roosting/hibernating bat presence across the study area.
13-03	Historic Railroads of Georgia: A Historic Context Study and Evaluation of Georgia's Historic Railroads	Neil Davis, Mulkey & Associates <u>Binh Bui, GDOT</u> Charles Lawrence, GDOT	Mobility	11/01/13 11/01/18	Produce guidelines for the evaluation of Georgia's historic railroads for National Register of Historic Places eligibility, based on a nationwide study of best practices for evaluating railroads by cultural resources professionals.
12-34	Historic Context and Handbook for the Identification and Evaluation of Georgia's Burial Grounds	Mary Beth Reed, New South Associates <u>Binh Bui, GDOT</u> Matthew Kear, GDOT	Mobility	06/11/13 05/31/19	Develop a historical narrative of cemetery development in Georgia, a typology for cemetery landscapes, and guidelines for conducting cemetery surveys.
12-03	Analyze, Synthesize and Report on the Results from Phase I of the Archaeological Site Compaction Study	Doris Willmer, Willmer Engineering, Inc. <u>Binh Bui, GDOT</u> Ian Rish, GDOT	Mobility	06/07/13 06/15/19	Evaluate the use of temporary archaeological site burial to minimize or eliminate mitigation costs.